

Application No. 10/575,165  
Amendment dated September 15, 2008  
Reply to Office Action of April 18, 2008

Docket No.: 21029-00310-US1

**AMENDMENTS TO THE DRAWINGS**

The Examiner has objected to the drawings as failing to show all that is claimed. The attached amended sheet of drawings responds fully.

Attachment: Replacement sheet

**REMARKS**

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Office Action and prior art relied upon have been carefully considered. In an effort to expedite the prosecution the claims have been amended to avoid further rejection under 35 USC 102 and 112. Further, the drawings have been changed to avoid the Examiner's objections thereto.

The Examiner has objected to the drawings as failing to show all that is claimed. The attached amended sheet of drawings responds fully.

Fig. 4 illustrates the valve variation of claim 2

Fig 5 illustrates the variation claimed in claim 4

Figs 6 and 7 clearly illustrate the outlet angles of 90° and 270°

claimed in claim 7 while Fig 1 shows the horizontal outlet angle (180°).

In paragraph 3 of the Office Action the Examiner rejects all the claims as non-enabling with respect to the pressure reduction stages as diaphragms. In this regard the Examiner's attention is directed to page 6, lines 11-14 of the specification as well as Fig 1 for sufficient enablement to one of skill in the art.

Claims 1, 2, and 4 have been rejected under 35 USC 102 as anticipated by Piggott (US 3,784,111). Applicants respectively disagree that anticipation exists. The reference is directed to a foam producing nozzle of the type using an air and fluid mixing chamber for discharging a foaming stream from the nozzle. A pair of spaced orifice plates are between the nozzle inlet and the mixing chamber and arranged to enhance the foam producing effect. More particularly the patent states in col 2, line 48 - col 3, line 3:

In accordance with the present invention, the orifice 30 in the plate 25 next to the mixing chamber has a smaller cross-sectional flow area than the orifice 31 in the second plate 26 closest to the inlet end. By arranging the flow area as described and by arranging two orifice plates in a spaced relation in the inlet passage, an expansion chamber is defined between the plates 25 and 26 which produces turbulence and a thorough mixing of the liquid passing through orifice 30 and the air admitted through the apertures 18 to mixing chamber 17. The thorough mixing

thus provided increases the foaming effect on the foaming agent carried by the liquid being sprayed.

The solid stream passing through orifice 30 flares out to entrain the air entering through the apertures 18. This in turn produces a flood effect through the tapered portion 19 and at the orifice defining portion 20. As the stream passes from the orifice defining intermediate portion 20 it is allowed to expand in the enlarged bore 21 which produces an additional mixing action to further improve foam quality. The length of the bore 21 should be at least three and one-half times its diameter to prevent flaring of the spray as it leaves the nozzle tip body.

Thus the configuration of the reference foam producing nozzle is quite different from the structure set forth in independent claim 1. For example, the reference has no corresponding structure for the claimed:

the outlet pipe consists of a sudden pressure reduction and cavitation confinement pipe, whose minimum length substantially corresponds to the distance separating the end of said pipe on the second pressure reduction stage side from the point of reattachment of the jets onto the walls of the pipe, with an angle of divergence of the jets, before reattachment, between 3° and 12°.

The relation between air and pressurized water according to the invention is discussed on page 1, line 39 and page 2 lines 1-9 of the specification.

Further, the pressure reduction stages of Piggott don't provide for absorption of stated pressure percentages as claimed in claim 1.

For the reasons set forth above, the present application is believed to be allowable.

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185, under Order No. 21029-00310-US1 from which the undersigned is authorized to draw.

Dated: September 15, 2008

Respectfully submitted,

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